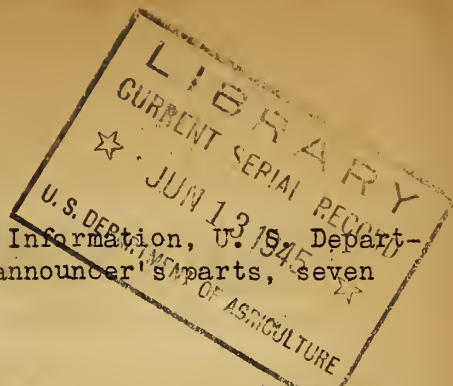


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A "WHAT'S NEW IN ALFALFA"

Recorded by Ernest Moore and M. L. DuMars, Office of Information, U.S. Department of Agriculture, April 10, 1945. Time, without announcer's parts, seven minutes and 23 seconds.



ANNOUNCER: (LIVE) And now by transcription...from the United States Department of Agriculture...the story of alfalfa, "queen of the forage plants" -- the oldest and most important hay crop in the world.

Thanks to the work of the plant breeders in developing resistant varieties, farmers in the United States are now growing around 15 million acres of alfalfa a year. Fine quality forage that helps the dairymen meet their all-time high milk production goals, and helps the livestock growers turn out beef and mutton.

But listen to the story, "What's New in Alfalfa," as reported by Ernie Moore and Duke DuMars of the Department of Agriculture.

TRANSCRIPTION

ERNIE MOORE: Duke, suppose we divide our alfalfa story.

DUMARS: All right.

MOORE: You give us about two minutes worth of early history -- and then we'll talk about new varieties -- and maybe say a few words about hybrid alfalfas.

DUKE DUMARS: Shall I begin at the beginning?

MOORE: Good place as any.

DUMARS: Thousands and thousands of years ago, alfalfa was growing wild in the fields of southwestern Asia. In Persia, and Turkistan. Then in the year 490 B.C., when the Persians invaded Greece, they had to have feed for their chariot horses and camels -- so naturally they took along some alfalfa seed. From Greece it spread to other countries of Europe, including Spain.

MOORE: And from Spain?

DUMARS: From Spain it was taken to South America -- Peru and Chile -- by the Spanish explorers. And from Chile it went to California.

MOORE: That was in the 1850's.

DUMARS: In the Gold Rush days. When gold was discovered in California, a lot of fortune-hunters in the East sailed to California by the long water route around Cape Horn. And on the way -- along the coast of Chile -- when the ships put in to port for a few days -- the passengers would get out and stretch their legs.

MOORE: And some of the passengers -- roaming over the fields -- saw this strange-looking plant we're talking about today.

DUMARS: Evidently some of the boys were so much interested -- they filled their pockets with seed. So they'd have something to do, I suppose -- when they got bored with digging up all that gold they were going to find in California.

MOORE: Well anyway they took the seed to California. And how it flourished! Before many years it was growing in Utah and Colorado -- and then it spread out to Kansas and Nebraska...and Iowa and Missouri...and Ohio and Illinois.

DUMARS: Quite a trek, Ernie -- from Asia to Europe to Chile -- to California and points East.

MOORE: Of course, Duke, this alfalfa growing in Illinois, for example -- wasn't exactly the same crop the boys found growing in Chile -- in the Gold Rush days.

DUMARS: Growing in a new environment, generation after generation, of course it had changed somewhat.

MOORE: Yes, it had become adapted to a different soil and climate -- and it was known by the name "Common," along with the region or State where it was grown. For instance there was Southern Common...Dakota Common...Kansas Common...Montana Common. But now let's back up here -- and see what was going on in the Eastern part of the United States.

DUMARS: Farmers in New York had been growing alfalfa for many years before it reached California -- and Thomas Jefferson and George Washington grew alfalfa in Virginia. But it never did so well in this part of the country. Probably for that reason, it didn't spread from East to West to the same extent as many other crops. It spread mainly from West to East.

MOORE: Yes, that's right. Now let's see what happened in the Northern part of the country. Especially in Minnesota.

DUMARS: What happened in Minnesota -- in the year 1857 -- was the arrival of a young immigrant farmer named Wendelin Grimm. He came over from a little village in Germany. And being a thrifty young man -- he brought along a few pounds of alfalfa seed.

MOORE: He settled in Carver County -- almost 90 years ago.

DUMARS: And raised alfalfa on the same farm for 50 years!

MOORE: Winter after winter...generation after generation...he'd save the seed from alfalfa plants that survived the cold winters of Minnesota. Then after 50 years -- plant breeders at State Experiment Stations, and in the United States Department of Agriculture, got very much interested in Mr. Grimm's alfalfa.

DUMARS: I guess they thought maybe he had something there -- after 50 years of "survival of the fittest."

MOORE: He had something all right! He had the first alfalfa grown in this country that would stand the cold winters of the North. So here's the picture of alfalfa in the United States, in the year 1903. In the West and Middle West, farmers were getting along fine with strains of "Common" alfalfa that originated in Chile. In the North, they were growing "Grimm" alfalfa. Why in those days, a field would keep right on producing for 15 years! A good stand of alfalfa was almost like a gold mine.

DUMARS: You mean -- until that wilt disease appeared on the scene.

MOORE: That changed the whole picture. But there's one thing we ought to mention here -- before we tell about the wilt disease. During this time the plant breeders were working to improve alfalfa. To develop varieties more resistant to cold...resistant to drought...and higher in yield.

DUMARS: But not resistant to that worst of all alfalfa diseases -- bacterial wilt.

MOORE: No -- because it hadn't yet caused any trouble. It wasn't till the early 1920's -- or maybe a little earlier -- that farmers in Nebraska and Kansas, and Illinois, and Wisconsin -- began to notice a strange thing happening to their alfalfa. Whole stands would die out after a couple or three years. The disease kept on spreading. Losses went up into millions of dollars. Then in 1925, they found the cause of the trouble.

DUMARS: Wasn't it a bacterium they'd never known about before?

MOORE: It was. And it caused a disease that makes alfalfa become stunted and die out. Well, after they'd tried just about everything -- they decided there was only one way in the world to fight bacterial wilt. That was to develop alfalfa that would grow in spite of the wilt.

DUMARS: That's when they called in the plant explorers.

MOORE: Yes, and they searched nearly every country in the world -- hoping to find strains of alfalfa immune to wilt. The late Harvey Westover made two trips to Asia. He traveled in Turkistan -- the native home of wild alfalfa -- and eventually he and his co-workers brought back hundreds of samples. Then the plant-breeders went to work. Their job was to combine the wilt-resistance of the Turkistan alfalfas with the good qualities of our standard varieties like Grimm and Common.

DUMARS: Didn't they make thousands of crosses -- before they got what they were after?

MOORE: Yes -- but finally, in 1942, plant breeders of the Department of Agriculture, working in cooperation with the Nebraska Experiment Station, introduced a new variety known as "Ranger." Wilt-resistant...winter-hardy...well suited to all parts of the Northern United States where bacterial wilt is serious. The next year, 1943, the plant breeders introduced a new variety for the Central States known as "Buffalo."

DUMARS: Work on that one was done in Kansas.

MOORE: That's right. And Buffalo is so new -- there won't be much seed available until 1947.

DUMARS: Are you going to tell about -- "Nemastan"?

MOORE: Right away. Maybe I'd better say first that bacterial wilt isn't the only thing alfalfa growers have to contend with. In the irrigated valleys of the West -- in certain parts of Utah and Nevada and California, and nearby States -- they have a different problem. The stem nematode. It's so serious -- the plant breeders took on the job of getting a variety of alfalfa, for this region only -- and that's the one they call "Nemastan."

DUMARS: Meaning -- it can stand the nematode?

MOORE: That's the way it works. But you don't grow Nemastan anywhere except in this Western area, and like Buffalo, it's so new that there won't be any seed for some time yet. So.....we'll have Ranger and Buffalo, and Nemastan -- and for the Eastern States, there's the new "Atlantic" produced at the New Jersey Experiment Station.

DUMARS: Anything for the Southwest?

MOORE: For the Southwest, and the Deep South, they're working to develop a new variety from strains brought over from India.

DUMARS: If they keep on -- they'll have varieties for every section of the country where alfalfa grows.

MOORE: That's just what they're aiming for. As Dr. Tysdal* says -- he's in charge of the Department's alfalfa breeding work -- their aim is to develop more and better varieties, adapted to regions rather than single States.

DUMARS: Did Dr. Tysdal say anything about hybrid alfalfa?

MOORE: He certainly did! Hybrids are the next big thing in alfalfa. It won't surprise me a bit -- if hybrid alfalfas turn out to be as big a success as hybrid corn. Even now, they've got hybrids that will increase yields by 25 to 30 percent.

DUMARS: And they've only started.

MOORE: To quote Dr. Tysdal -- we'll let him have the last word -- "You may be sure the plant breeders will continue to work their heads off, to keep alfalfa 'queen of the forage crops.'"

ANNOUNCER: (LIVE) You've heard Ernie Moore and Duke DuMars, of the United States Department of Agriculture, in one of a series of reports on -- "Farm Science Serves the Nation."

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